the 30th, passed slowly over the Upper Lake region, remaining nearly stationary during the afternoon and night of the 30th, and rapidly moving to the northeastward early on the morning of the 31st.

## ATMOSPHERIC TEMPERATURE.

Chart No. II expresses graphically (by the red isothermal lines) the mean distribution of temperature for March; and the table in the left-hand lower corner gives, numerically, the actual and comparative severity and mildness of the temperature for the various districts. The isotherms of 20° (running through the Lake region and the St. Lawrence valley) and 60° (running through the Gulf States) indicate the extreme thermometric means for March. The means for the St. Lawrence valley, the Middle States, the whole Lake region and Upper Mississippi valley, are all 5° or more below those of many years, evidencing the extraordinary severity and protractedness of the winter's cold. In only one district east of the Rocky Mountains (i. e. the South Atlantic States) has the temperature been as high as usual for the month. The lateness of the spring is specially marked in the lower Missouri valley, and is also observed in New England and the Northwest. The abnormal cold of this month is the lingering result of the intensely severe winter, and is not ascribable to any physical causes operating in March. The isothermal lines run nearly due east and west, with no southward deflection in the Mississippi valley, due to areas of high barometer and low temperature descending from the Northwest. A comparison of the isothermal lines for February and March shows that, during the latter month, the mean rise of temperature over the United States was from 5° to 10° Fahrenheit.

## PRECIPITATION.

On Chart No. III is shown the distribution of rain and melted snow for March. It will be seen from this that a very large excess of rain fell in the lower Mississippi valley, the Gulf and South Atlantic States and Tennessee. In these districts the fall amounted, in some localities, to 12 or 14 inches and more. There was also a very unusual quantity of water precipitated in southern and central Virginia. The minimum fall occurs in the Florida peninsula; but in the other portions of the South Atlantic States a very great excess fell, the total amount in Georgia occasionally exceeding 10 inches. The largest excess is in Tennessee, where the month's rainfall has been more than double the usual quantity. The only deficiency, and that an insignificant one, is in the Lower Lake region. This immense and general rainfall is attributable to the large evaporation of ice and snow and the moist southerly winds encountering, in their movements, the condensing influence of a continent chilled to an unusual degree by the excessive cold of January and February.

The number of days on which rain fell during the month, in the several districts, averages as follows: In New England, 15 days; in the Middle Atlantic States, 15; in the South Atlantic States, 14; the Gulf States, 12; the Lake region, 15; the Ohio valley and Tennessee, 15, and in the Northwest, 11 days.

## HUMIDITY.

The average relative humidity for the various districts is as follows: For New England, 73 per cent.; Middle Atlantic States, 76; South Atlantic States, 72; the Eastern Gulf States, 74; Western Gulf States, 71; Lower Lakes, 75; Upper Lakes, 73; Ohio valley and Tennessee, 67; Upper Mississippi valley, 74; the Lower Missouri valley, 72; and Minnesota, 77.